UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,128	08/08/2001	Ian J Forster	P/61459-PCT	8713

156 7590 07/11/2005

KIRSCHSTEIN, OTTINGER, ISRAEL
& SCHIFFMILLER, P.C.
489 FIFTH AVENUE
NEW YORK, NY 10017

EXAMINER	
AU, SCOTT D	

ART UNIT	PAPER NUMBER
2635	

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/831,128	FORSTER, IAN J	
	Examiner	Art Unit	
	Scott Au	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24-33,35 and 36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *35 and 36* is/are allowed.

6)☒ Claim(s) *24-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This communication is in response to applicant's response to an Amendment, which is filed February 15, 2005.

An amendment to the claims 24-33 have been entered and made of record in the Application of Forster for "A receiver circuit" filed August 8, 2001.

Claims 24-33 and 35-36 are pending.

Claims 1-23 and 34 are cancelled.

The new claims 35-36 are introduced.

Response to Arguments

Applicant's arguments with respect to claims 24-33 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 24-27 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cofino et al. (US# 6,288,629) in view of Hasler (US# 4,264,980), Minakuchi et al. (US# 4,393,514) and further in view of (GB# 2284323).

Referring to claim 24, Cofino et al. disclose an antenna for receiving an amplitude modulated carrier signal at a modulated frequency (col. 5 lines 1-5);

a transistor connected to the antenna and configured to operate as a detector of modulation of the amplitude modulated carrier signal (col. 4 lines 60-67).

However, Cofino et al. did not explicitly disclose a resonator circuit connected to the transistor and configured such transistor simultaneously self-oscillates at substantially the modulation frequency to produce an oscillation signal; an oscillator quenching means for periodically quenching oscillation of the transistor; and means for sensing characteristics of a build-up of oscillation to indicate a presence of the modulated carrier signal.

In the same field of endeavor of Rf device, Hasler discloses a receiver circuit comprising:

an antenna (5) (i.e. an antenna) for receiving a modulated carrier at a modulation frequency; a transistor (10) (i.e. a transistor) connected to the antenna (5) (i.e. an antenna) and configured to operate as a detector of modulation of the carrier signal (i.e. see Abstract and col. 2 lines 5-14; see Figure available);

a resonator circuit (11) (i.e. a resonator circuit) connected to the transistor (10) (i.e. a transistor) and configured such transistor (10) (i.e. a transistor) simultaneously self-oscillates at substantially the modulation frequency to produce an oscillation signal (col. 2 lines 15- 43; see Figure available) in order to process the high frequency is receivng.

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to include a resonator circuit connected to the transistor and configured such transistor simultaneously self-oscillates at substantially the modulation frequency to

produce an oscillation signal of Hasler in the receiving Rf receiving device of Cofino et al. with motivation for doing so would allow the receiver to process the frequency is received.

However, Cofino et al. in view of Hasler did not explicitly disclose an oscillator quenching means for periodically quenching oscillation of the transistor; and means for sensing characteristics of a build-up of oscillation to indicate a presence of the modulated carrier signal.

In the same field of endeavor of receiver circuit, Minakuchi et al. teach an oscillator quenching means (32) (i.e. a quenching oscillator) for quenching oscillation of the transistor (T1); and means (8) (i.e. a control) for sensing characteristics of a build-up of oscillation to indicate a presence of the modulated carrier signal (col. 1 lines 35-51 and col. 4 lines 59-68; see Figures 5-6) in order to modify at least one oscillation condition of the quenching oscillator.

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to include a quenching oscillator for quenching oscillation of the transistor; and a control for sensing characteristics of a build-up of oscillation to indicate a presence of the modulated carrier signal of a receiver disclosed by Minakuchi et al. into receiver circuit of Cofino et al. in view of Hasler with the motivation for doing so would allow the circuit to operate at low power consumption and cost wise.

However, Cofino et al. in view of Hasler and Minakuchi et al. did not explicitly disclose an oscillator quenching means for "periodically" quenching oscillation of the transistor.

In the same field of endeavor of receiver circuit, (GB# 2284323) discloses an oscillator quenching means for "periodically" quenching oscillation of the transistor (i.e. see Applicant's specification on page 3 lines 14-23).

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to include an oscillator quenching means for "periodically" quenching oscillation of the transistor of (GB# 2284323) in the used of quenching means of Cofino et al. in view of Hasler and Minakuchi with the motivation for doing so would allow higher current and gain.

Referring to claim 25, Cofino et al. in view of Hasler, Minakuchi et al. and further in view of (GB# 2284323) disclose a receiver circuit of claim 24. Minakuchi et al. disclose in which the oscillator quenching means quenches the oscillation of the transistor when a magnitude of the oscillation reaches a selected magnitude, and in which the means for sensing measures a time between quenching of the transistor to indicate the presence of the modulated carrier signal (col. 4 lines 59-68 and col. 6 lines 52-54).

Referring to claim 26, Cofino et al. in view of Hasler, Minakuchi et al. and further in view of (GB# 2284323) disclose a receiver circuit of claim 24. Minakuchi et al. disclose in which the selected magnitude is a point at which oscillator compression of the transistor occurs (col. 6 lines 31-54).

Referring to claim 27, Cofino et al. in view of Hasler, Minakuchi et al. and further in view of (GB# 2284323) disclose a receiver circuit of claim 24. Minakuchi et al. disclose in which the oscillator quenching means quenches the oscillation of the transistor at regular time intervals, and in which the means for sensing measures a magnitude of the oscillation over at

least one of the time intervals to indicate the presence of the modulated carrier signal (col. 7 lines 20-47).

Referring to claim 32, Cofino et al. in view of Hasler, Minakuchi et al. and further in view of (GB# 2284323) disclose a receiver circuit of claim 24. Minakuchi et al. disclose in which the resonator circuit (311) comprises a network of at least one of a capacitor and an inductor (col.1 lines 42-43; see Figures 2, 6, 9 and 11).

Claims 28-29 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cofino et al. (US# 6,288,629) in view of Hasler (US# 4,264,980), Minakuchi et al. (US# 4,393,514) and (GB# 2284323) as applied to claim 24 above, and further in view of Forster (US# 5,822,685)

Referring to claim 28, Cofino et al. in view of Hasler, Minakuchi et al. and further in view of (GB# 2284323) disclose the receiver circuit of claim 24. However, Cofino et al. in view of Hasler, Minakuchi et al. and (GB# 2284323) did not explicitly disclose in which the transistor comprises of a field effect transistor.

In the same field of endeavor of transistor device, Forster teaches the transistor comprises of a field effect transistor (col. 1 lines 37-40 and col. 2 lines 10-16) which is switchable between the detect and reflect modes by increasing the drain/source current.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include the transistor comprises of a field effect transistor disclosed

by Forster into receiver circuit of Cofino et al. in view of Hasler, Minakuchi et al. and (GB# 2284323) with the motivation for doing so would allow a FET transistor type to operate as a detector of the modulation of the signal.

Referring to claim 29, Cofino et al. in view of Hasler, Minakuchi et al., (GB# 2284323) and further in view of Forster disclose the receiver circuit of claim 28 above, Forster further discloses in which the oscillator quenching means quenches the oscillation of the field effect transistor by varying a drain source current (col. 1 lines 37-40, col. 2 lines 10-16 and col. 3 lines 15-29).

Referring to claim 33, Cofino et al. in view of Hasler, Minakuchi et al. and further in view of (GB# 2284323) disclose the receiver circuit of claim 24 above, Forster discloses further comprising a matching network (3) (i.e. matching network) between the antenna (2) and the transistor (1) (col. 2 lines 9-14; see Figure 1).

Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cofino et al. (US# 6,288,629) in view of Hasler (US# 4,264,980), Minakuchi et al. (US# 4,393,514) and (GB# 2284323) as applied to claim 24 above, and further in view of Brekelmans (US# 5,710,993).

Referring to claim 30, Cofino et al. in view of Hasler, Minakuchi et al. and further in view of (GB# 2284323) disclose the receiver circuit of claim 24. However, Cofino et al. in view

of Hasler, Minakuchi et al. and (GB# 2284323) did not explicitly disclose in which the resonator circuit comprises a ceramic resonator.

In the same field of endeavor of receiver apparatus, Brekelmans teach the resonator circuit comprises a ceramic resonator (col. 4 lines 40-44) in order to determine the oscillation frequency.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include the resonator circuit comprises a ceramic resonator disclosed by Brekelmans into receiver circuit of Cofino et al. in view of Hasler, Minakuchi et al. and (GB# 2284323) with the motivation for do so would allow the determination of the oscillation frequency.

Referring to claim 31, Cofino et al. in view of Hasler, Minakuchi et al. and further in view of (GB# 2284323) disclose the receiver circuit of claim 24 above, Brekelmans further discloses the resonator circuit comprises a quartz crystal (col. 4 lines 40-44).

Allowable Subject Matter

Claims 35-36 are allowed.

Referring to claims 35 and 36, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations that "a narrowband filter for converting the frequency modulated carrier signal to an amplitude modulated signal at a modulation frequency; a transistor connected to the narrowband filter and configured to operate as a detector of modulation of the amplitude modulated signal".

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications form the examiner should be directed to Scott Au whose telephone number is (571) 272-3063. The examiner can normally be reached on Mon-Fri, 8:30AM – 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached at (571) 272-3068. The fax phone numbers for the organization where this application or proceeding is assigned are (571)-273-8300.

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600